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ABSTRACT

A description is provided of a course, "Nursing in the Pediatric Intensive Care Unit," offered for senior-level baccalaureate degree nursing students. The first section provides information on the place of the course within the curriculum, the allotment of class time, and target student populations. The next section looks at course content in terms of major course goals, long-range objectives, and units of instruction. A list of texts and other instructional materials for the course is followed by descriptions of the nine instructional units: (1) Children Are Different; (2) Psychosocial Aspects of Pediatric Intensive Care Units; (3) Cardiovascular Disorders; (4) Pulmonary Disorders; (5) Chest X-Ray Interpretation; (6) Neurologic Disorders; (7) Renal Disorders; (8) Gastrointestinal Disorders; and (9) Instrumentation: Principles and Techniques. Finally, information on student and course evaluation is provided, including an estimation of the number of students who will meet course objectives and provisions for those who fail. (LAL)

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Nursing 205

NURSING IN THE PEDIATRIC INTENSIVE CARE UNIT

School of Nursing
Bachelor of Science in Nursing
Mount St. Mary's College

Deborah M. Varton
1987

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JC 870 117

Submitted for Education 431B
Graduate School of Education
University of California, Los Angeles

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COURSE DESCRIPTION

The course NURSING IN THE PEDIATRIC INTENSIVE CARE UNIT, Nursing 205, is offered to the senior level nursing students in the baccalaureate degree program, during their last semester of nursing school. The course will only be offered in the spring semester.

Nursing 205 is a lecture course dealing with the care of children in the pediatric intensive care unit, based on M. F. Hazinski's Nursing Care of the Critically Ill Child. The lecture will entail a total of four hours of lecture per week. The classes will be held in two hour sessions twice a week. In addition, the students will be required to enroll, concurrently, in Nursing 206, CLINICAL NURSING PROCESS IN THE PEDIATRIC INTENSIVE CARE UNIT.

Prerequisites for enrollment in NURSING IN THE PEDIATRIC INTENSIVE CARE UNIT will include successful completion of: Nursing 105 and 106, GENERAL PEDIATRICS and CLINICAL NURSING PROCESS IN THE GENERAL PEDIATRIC UNIT with grade "B" or better. Letters of recommendation from each instructor from Nursing 105 and 106 will be required prior to acceptance in Nursing 205 and 206.

There will be a maximum of twenty students allowed in the course.

The anticipated rate of drop out will be relatively low, less than five percent. The rationale for this low drop out rate is related to two factors. The first factor has to do with pre-selection. Only those students who have shown above average ability in the area of pediatrics will be accepted. Because the course is an elective, those students enrolled in Nur. 205 generally will have a high level of interset in the subject matter and as a result will do well.

COURSE CONTENTS

"Mount St. Mary's College is an academic community devoted to continuing exploration of our relation to God, other persons, and nature. This exploration takes the form of programs designed to provide experiences in the principal modes of thought by which we reach understanding, and the strengths and limitations of these modes. The objectives are to assist the student to develop a disciplined and continuing curiosity, a receptivity to new ideas, and a base for evaluation of these ideas."

"Within the framework of these same major objectives, the college also offers programs, undergraduate and graduate, in which the student engages in more intensive study appropriate to a specific career. In this way the college ensures that it will not only directly serve the society that supports it, but will also enhance the student's awareness of an ever-changing context within which values of the individual must operate. It is in this latter context of a dynamic society that programs of continuing education will find and play their role."

"Mount St. Mary's College offers four-year courses of study leading to the degrees of Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music, and Bachelor of Science. Primarily these are offered on the Chalon Campus."

"Within the liberal arts tradition, the curriculum provides the student with a broad and liberating background in the arts and sciences, and aims at developing his/her ability to communicate knowledge and to apply appropriate principles and techniques to particular problems. During the junior and senior years, the students pursue deeper study in their major areas of concentration and take related elective courses." (Mount St. Mary's College Handbook)

The goal of Nursing 205-NURSING IN THE PEDIATRIC INTENSIVE CARE UNIT is to prepare the students, within the pediatric functional elective, for clinical practice in the intensive care unit upon graduation, by providing a deeper study in their area of concentration-Pediatrics. NURSING IN THE PEDIATRIC INTENSIVE CARE UNIT will provide the pediatric nursing students with a broad theoretical base of knowledge in pediatric intensive care nursing.

COURSE CONTENTS

NURSING IN THE PEDIATRIC INTENSIVE CARE UNIT was prepared for those students wishing to gain:

1. further instruction in the area of pediatric intensive care in the baccalaureatte program;

2. the prerequisite to entry into clinical practice as a Registered Nurse in a Pediatric Intensive Care Unit.

The long range objectives, stated below, will assist the professor in evaluating the effectiveness of the course. Because NURSING IN THE PEDIATRIC INTENSIVE CARE UNIT is a new course, the objectives are only estimations. Once the course has been offered the expectations of effectiveness wil be validated.

1. Ninety-five percent of graduates from this course will successfully pass the pediatric section on the State Board Examination on the first attempt.

2. Within six months of graduation eighty percent of the students who have successfully completed Nur. 205 will be employed as Registered Nurses in a pediatric intensive care unit.

3. Of those students practicing in the pediatric intensive care unit, eighty percent will be given above average ratings by their supervisors on their six month evaluation.

4. One-half of the students practicing in the pediatric intensive care unit will enter a masters degree program of study in pediatrics within five years after graduation.

COURSE CONTENTS

List of units of instruction:

UNIT		HOURS
I	Children are Different	2
II	Psychosocial Aspects of Pediatric ICU	6
III	Cardiovascular Disorders	10
IV	Pulmonary Disorders	10
V	Chest X-Ray Interpretation	2
VI	Neurologic Disorders	10
VII	Renal Disorders	8
VIII	Gastrointestinal Disorders	8
IX	Instrumentation: principles and techniques	4

MATERIALS OF INSTRUCTION

Required Texts

Hazinski, M. F., Nursing Care of the Critically Ill Child. St. Louis: The C. V. Mosby Company, 1984.

Petrillo, M. and Sanger, S., Emotinal Care of Hospitalized Children. Philadelphia: J. B. Lippincott, 1980.

Recommended Texts (on reserve in the library)

Berne, R. M. and Levy, M. N., Cardiovascular Physiology. St. Louis: The C. V. Mosby Company, 1986.

Godfrey, S. and Baum, J. D.; editors: Clinical Paediatric Physiology. Oxford: Blackwell Scientific Publications, 1979.

Nelson, W. E.; editor: Textbook of Pediatrics. Philadelphia: W. B. Saunders Company, 1983.

Ross, G., Essentials of Human Physiology. Chicago: Yearbook Medical Publishers, Inc., 1982.

MATERIALS OF INSTRUCTION

List of audio-visual materials

All of the audio-visual materials used in this course will be obtained through the Learning Resource Center

DDST Manual
DDST Module
Play Therapy Module

Films and cassettes

Assessment of Growth and Development
Physical Assessment of the Newborn
Pediatric Examination: Infant
Pediatric Examination: Toddler
Human Development: the first 2-1/2 years
Human Development: 2-1/2 years - 6-1/2 years
Human Development: 6 years - 12 years
Human Development: adolescent years- 12 years - 16 years
Respiratory Problems of the Newborn
Renal Disease

Date due_____

UNIT I

Children are Different

Critically ill children are oftened cared for in adult intensive care units. Although, many signs and symptoms of diseases may be the same, the child is immature physically and emotionally and therefore cannot be treated as a small adult. The purpose of this unit is to highlight the similarities and differences between children and adults.

I. Goal: You will be familiar with the physiological differences between children and adults.

Objectives: Verbally, in class, you along with one colleague, will give a brief ten minute discussion of one of the following aspects of physiological differences between children and adults:

Choose one of the following:

- general assessment
- thermoregulation
- fluid requirements
- caloric requirements
- electrolyte balance
- cardiovascular function
- respiratory function
- neurologic function

UNIT I

Readings

Required:

Hazinski, M. F., Nursing Care of the Critically Ill Child. St. Louis: The C. V. Mosby Company, 1984 Chapter 1.

Assessment of Growth and Development (film and cassette in the Learning Resource Center)

Physical Examination of the Newborn (film and cassette in the Learning Resource Center)

Pediatric Examination of the Infant (video in the Learning Resource Center)

Pediatric Examination of the Toddler (video in the Learning Resource Center)

Pediatric: the Nursing Challenge (film and cassette in the Learning Resource Center)

Recommended:

Godfrey, S. and Baum, J. D., editors: Clinical Paediatric Physiology. Oxford: Blackwell Scientific Publications, 1979.

Nelson, W. E., Textbook of Pediatrics. Philadelphia: W.B. Saunders Company, 1983.

General Assessment: Nelson pp 65-70

Thermoregulation: Hazinski Chapter 1

Fluid Requirement: Nelson pp 206-239

Caloric Requirement: Nelosn pp 206-239

Electrolyte Balance: Nelson pp 206-239

Cardiovascular Function: Nelson pp 1100-1104

Respiratory Function: Nelson pp 991-996

Neurologic Function: Nelson pp 1546-1554

Date due_____

UNIT II

Psychosocial Aspects of Pediatric Critical Care

"Critically ill children present a difficult and poignant challenge to all who work with them. Though it is certainly a crisis, critical illness need not be a traumatic interruption of growth, with devestating effects on the child or family. Understanding of the meaning of illness and hospitalization to the child, normal growth and development, and family dynamics can contribute to care which returns each child home not only with an improved health status, but with increased self-esteem and confidence in his or her ability to handle a difficult situation. Indeed, hospitalization can provide a significant stimulus for growth of the entire family if skills and support are offered in meeting difficult needs and challenges." (Preamble: First paragraph of the Position Statement on Critical Care for Children. Association for the Care of Children's Health)

I. Goal: You will be able to perform a psychosocial assessment on a critically ill child.

Objective: 1a. Outside of class you will perform a psychosocial assessment of a critically ill child/family and write a 15-20 page paper reflecting your findings, to include developmental milestones related to each of the major theories of development of Erikson, Freud, Gesell, and Piaget.

1b. Given fifty descriptions of child behavior, in class, during a closed book examination, you will match them with the corresponding developmental theories, within the appropriate age level, with 80% accuracy.

Example:

____trust vs mistrust
____pincer grasp
____three word sentences

First year of life
A. Gesell
B. Piaget
C. Erikson
D. Freud
1 - 3 years
E. Gesell
F. Piaget
G. Erikson
H. Freud

UNIT II

Psychosocial Aspects of Pediatric Critical Care

Objectives: (continued)

1c. In class, given two choices, you will choose one and describe in essay form, in 100 words or less, during closed book examination, the major fears, characteristics of thinking, and methods of preparation of children for procedures and surgery.

Example:

Please discuss the major fears, characteristics of thinking and preparation for procedures of toddlers or adolescents in 100 words or less without using your books or notes.

UNIT II

Readings

Required:

Hazinski, M. F., Nursing Care of the Critically Ill Child. St. Louis: The C. V. Mosby Company, 1984 Chapter 2.

Petrillo, M. and Sanger, S., Emotional Care of Hospitalized Children. Philadelphia: J. B. Lippincott, 1980. Chapter 2 and pp 222-227.

Human Development: the first 2-1/2 years
Human Development: 2-1/2 years - 6-1/2 years
Human Development: 6 years - 12 years
Human Development: adolescent years- 12-16 years
(film and cassette series in the Learning Resource Center)
DDST (learning module in the Learning Resource Center)
Play Therapy (learning module in the Learning Resource Center)

Recommended:

Benz, G. S., "Play and Recreation for Children" Pediatric Nursing, Chapter 24, St. Louis, The C. V. Mosby Company, 1964, pp. 282-296.

Schraeder, B. D., "Attachment and Parenting Despite Lengthy Intensive Care" MCN, pp 37-41, January/February 1980.

Date due_____

UNIT III

Cardiovascular Disorders

All children admitted to an intensive care unit require a thorough cardiovascular assessment. The purpose of this unit is to review the embryology, physiology, and hemodynamic principles of the cardiovascular system. The most common cardiovascular problems seen in critically ill children include congestive heart failure, low cardiac output, arrhythmias and hypoxemia. These topics will also be discussed. The etiology, pathophysiology, clinical signs and symptoms, medical and surgical treatment and nursing responsibilities of specific congenital heart defects will be reviewed. Postoperative complications of cardiovascular surgery will be presented along with the nursing responsibilities. A breif discussion of diagnostic tests frequently required in the pediatric cardiovascular patient will conclude this unit.

I. Goal: You will understand the etiology, pathophysiology, signs and symptoms, and medical, surgical and nursing management of specific diseases of the cardiovascular system in the pediatric patient.

Objective: In class, you will give a 15-20 minute presentation on the etiology, pathophysiology, clinical signs and symptoms, medical treatment and nursing interventions of one of the following cardiovascular diseases.

Choose one of the following:
- patent ductus arteriosus
- aortopulmonary window
- atrial septal defect
- ventricular septal defect
- endocardial cushion defect
- double outlet right ventricle
- pulmonary valve stenosis
- tetralogy of fallot
- truncus arteriosus
- pulmonary atresia
- tricuspid atresia/hypoplastic right heart
- transposition of the great vessels
- total anomalous pulmonary venous connection

(see the next page for additional choices)

UNIT III

Cardiovascular Disorders

coarctation of the aorta
interrupted aortic arch
aortic stenosis
hypoplastic left heart syndrome

II. Goal: You will understand the principles of cardiovascular hemodynamics and physiology.

Objectives: In class, you will complete, with 80% accuracy, a 30 item multiple choice, closed book test, covering the essential anatomy and physiology, and common clinical conditions of the cardiovascular system, such as: congestive heart failure, low cardiac output, arrhythmias and hypoxemia.

Example: The sarcomere contains protein filaments of:
a. t-tubules and sarcoplasmic reticulum
b. actin and myosin
c. sodium and potassium
d. amino acids

III. Goal: You wil be able to apply the Roy Adaptation Nursing Model to the cardiovascular patient.

Objectives: You will submit a 3-5 page nursing care plan, using the Roy Adaptation Model, discussing one aspect of care of the cardiovascular surgical patient.

Choose one:
preoperative preparation of child and family
preoperative assessment
admission of the child into the ICU
postoperative care:
cardiovascular function
respiratory function
fluid therapy and renal function
neurologic function
thermoregulation
infection
postcardiotomy syndrome

UNIT III

Readings

Required:

Hazinski, M. F., Nursing Care of the Critically Ill Child. St. Louis: The C. V. Mosby Company, 1984 Chapter 3.

Recommended:

Berne, R. M. and Levy, M. N., Cardiovascular Physiology. St. Louis: The C. V. Mosby Company, 1986.

Artman, M.; and Graham, T. P., "Congestive Heart Failure in Infancy: Recognition and Management." American Heart Journal. pp 1040-1055, June 1982.

Date due_____

UNIT IV

Pulmonary Disorders

Pulmonary disease is a common cause of illness in the infant and child and it accounts for many of the admissions into the intensive care unit either as the primary diagnosis or as a secondary complication. Therefore, this unit will cover the pulmonary physiology, pathophysiology, and pulmonary assessment techniques. Interpretation of blood gases and indications for intubation and mechanical ventilation and recognition of complications of such will be reviewed.

I. Goal: You will understand the developmental factors that may influence the nursing care of pediatric patients with respiratory disorders.

Objectives: In class, you will complete, with 80% accuracy, an objective, closed book, 30 item test on: the embryology of the lung, anatomy of the lung, the upper airway, compliance and resistance, ventilation, lung volumes, ventilation-perfusion relationships, gas transport, and regulation of respiration.

Example: The total volume of gas contained in the lung at maximum inspiration is the:
a. total lung capacity
b. vital capacity
c. functional residual capacity
d. tidal volume capacity

II. Goal: You will understand the characteristics of acid-base disorders.

Objectives: In class, you will evaluate four examples of ABG results and determine whether they reflect respiratory acidosis, respiratory alkalosis, metabolic acidosis or metabolic alkalosis with 75% accuracy.

Example: Evaluate these blood gas results:

pH	7.40
pCO2	40
HCO3	26
pO2	96

Date due_____

UNIT IV

Pulmonary Disorders

III. Goal: You will understand the etiology, pathophysiology, clinical signs and symptoms, medical treatment and nursing interventions of specific diseases of the respiratory system in the pediatric patient.

Objectives: In class, you will give a 15 minute presentation on the etiology, pathophysiology, clinical signs and symptoms, medical treatment and nursing interventions of one of the following respiratory diseases:

Choose one of the following:
- croup
- epiglottitis
- foreign body aspiation
- diaphragmatic hernia
- respiratory distress syndrome
- bronchpulmonary dysplasia
- bronchial asthma
- near drowning
- chest trauma
- respiratory infections
- aspiration pnuemonia

or common clinical conditions:
- airway obstruction
- acid-base disorder
- respiratory failure

IV. Goal: You will understand the complications related to intubation and mechanical ventilation.

Objectives: Outside of class you will write a 1-2 page paper discussing the cause, signs and symptoms, and interventions of the complications of intubation and mechanical ventilation.

Choose one of the following:
- atelectasis
- oxygen toxicity
- trauma to upper airway, vocal cords or trachea

(see the next page for additional choices)

UNIT IV

Pulmonary Disorders

barotrauma
hypotension
arrhythmias
pulmonary emboli
restlessness and disorientation
peripheral nerve damage
retinal/conjunctival damage
gastric distention; ileus
gastric ulcer
starvation
constipation
positive water balance
infection
failure to wean
psychologic trauma

UNIT IV

Readings

Required:

Hazinski, M. F. Nursing Care of the Critically Ill Child. St. Louis: The C. V. Mosby Company, 1984, Chapter 4.

Shrake, K., "The ABC's of ABG's." Nursing 79, pp 26-33, September 1979

Respiratory Problems in the Newborn (film and cassette in the Learning Resource Center)

Recommended:

Fleming, P. J., "Congenital Central Hypoventilation and Sleep State". Pediatrics, No. 3, 66:425-428, September 1980.

Markestad, T. and Fitzhardinge, P. M., "Growth and Development in Children Recovering from Bronchopulmonary Dysplasia." Journal of Pediatrics. No. 4, 98:597-602, 1981.

Sugar, O., "In Search of Ondine's Curse." JAMA. No.3, 240:236-237, July 21, 1978.

"Ventilators and How They Work". American Journal of Nursing, December 1980, pp 2202-2205.

"Critical Care Ventilators". Health Devices Sourcebook, August 1982, pp264-283.

Date due_____

UNIT V

Chest X-Ray Interpretation

Chest X-Ray interpretation can aid the nurse in his/ her assessment and care of critically ill children. Often the nurse is the first to see the results of the chest x-ray and his/her ability to interpret the changes can aid in prevention or early detection of complications of therapy. This unit will present basic concepts of x-ray interpretation.

I. Goal: You will be able to intrepret basic changes and detect complications of therapy as visualized on the chest x-ray.

Objectives: Verbally, in class, you will interpret one chest x-ray, provided by the instructor, and explain the rationale behind your interpretation.

UNIT V

Readings

Required:

Hazinski, M. F., Nursing Care of the Critically Ill Child. St. Louis, The C. V. Mosby Company, 1984, Chapter 5.

Date Due_____

UNIT VI

Neurologic Disorders

This unit will present an overview of neurologic anatomy and physiology, and pathophysiology. The critical care nurse will be required to perform neurological assessments on his/her pediatric patients appropriate to the level of growth and development of the child.

I. Goal: You will understand the essential anatomy and physiology of the neurologic system.

Objectives: In class, you will write three essays, 100-200 words each in length, during a closed book examination covering eight aspects of the essential anatomy and physiology of the neurologic system. The aspects to be covered will include: axial skeleton, meninges, brain, cranial nerves, spinal cord, central nervous system circulation, cerebrospinal fluid circulation and intracranial pressure.

Example: In 100-200 words, describe the location, structure, and function of one of the major areas of the brain, without the use of your books or notes. Choose one: the cerebrum, brainstem, or cerebellum.

II. Goal: You will understand the etiology , pathophysiology, common clinical signs and symptoms, medical treatment and nursing interventions of common clinical conditions of specific diseases/conditions of the neurologic system of the pediatric patient.

Objectives: In class, you, along with one or two colleagues, will give a 30 minute verbal presentation on the etiology, pathophysiology, common clinical signs and symptoms, medical treatment, and nursing interventions of one neurological disease or condition.

Choose one of the following:
- increased intracranial pressure
- coma
- head trauma
- status epilepticus
- syndrome of inappropriate ADH secretion

(see the next page for additional choices)

UNIT VI

Neurologic Disorders

diabetes insipidus
cerebral death
intracranial tumors
meningitis
encephalitis
brain abscess
Reye's syndrome
Guillain-Barre syndrome

III. Goal: You will be able to apply the Roy Adaptation Model of Nursing to the neurosurgical pediatric patient.

Objectives: You will submit a 3-5 page nursing care plan, using the Roy Adaptation Model, discussing one aspect of care of the neurosurgical patient.

Choose one of the following:

- -possible compromise of the cardiorespiratory function related to anesthesia; surgical complications; or increased intracranial pressure
- -possible decrease in cerebral perfusion, cerebral herniation, or death related to increased intracranial presssure
- -possible status epilepticus related to irritable cerebral focus; withdrawal of previous anticonvulsant therapy; or fluid or electrolyte imbalance
- -possible fluid or electrolyte imbalance related to surgery and to potential SIADH or DI
- -possible infection related to contamination of operative site, ventricular drainage system, or ICP monitoring device; poor wound healing; continued CSF leak; or poor nutritional status

(see the next page for additional choices)

UNIT VI

Neurologic Disorders

-possible nutritional compromise related to prolonged coma; prolonged immobility; inadequate caloric intake; or anorexia, nausea or vomiting resulting from CNS disease or increased ICP
-possible skin breakdown or contractures related to immobility; poor nutritional status; or inadequate attention to skin care
-possible patient and family anxiety related to child's surgery or prognosis

UNIT VI

Readings

Required:

Hazinski, M. F., Nursing Care of the Critically Ill Child. St. Louis, The C. V. Mosby Company, 1984, Chapter 6.

Recommended:

Nelson, W.E., Textbook of Pediatrics. Philadelphia, W.B. Saunders, 1983, pp 1531-1607.

Date due_____

UNIT VII

RENAL DISORDERS

The kidneys are the organs responsible for the maintenance of hemostasis in the body. The renal system adjusts the amount and types of acids, ions, and fluid that are secreted and absorbed from the blood plasma. This unit will present the essential anatomy and physiology, common clinical conditions and specific diseases of the renal system. The discussion of care of the child undergoing dialysis will also be presented in this unit.

I. Goal: You will understand the essential anatomy and physiology of the renal system.

Objectives: In class, you will complete, with 80% accuracy a closed book, 30 item, multiple choice examination on the kidney structure, glomerular function, tubular function, composition and distribution of body water, and diuretics.

Example: Which component of the nephron provides a countermechanism for urine concentraion?
a. the loop of Henle
b. Bowman's capsule
c. glomerulus
d. collecting duct

II Goal: You will understand the etiology, pathophysiology, signs and symptoms, medical and nursing management of specific diseases of the renal system in the pediatric patient.

Objectives: In class, you, along with two other colleagues will give a 30 minute presentation on the etiology, pathophsyiology, common clinical signs and symptoms, medical treatment and nursing interventions of one of the following renal diseases/conditions.

Choose one of the following:
hypernatremic dehydration
hypotonic dehydration
SIADH and water intoxication
potassium deficit
potassium excess

(see the next page for additional choices)

UNIT VII

Renal Disorders

acute renal failure
nephrotic syndrome
acute glomerulonephritis
renal involvement in systemic lupus erythematosus
hemolytic-uremic syndrome
diabetes insipidus
diabetes mellitus/diabetic ketoacidosis
chronic renal failure

III. Goal: You will be able to apply the Roy Adaptation Model to the care of the dialysis patient.

Objectives: You will submit a 3-5 page nursing care plan, using the Roy Adaptation Model, discussing the three most important aspects of care of the dialysis patient.

Choose one type of dialysis:
hemodialysis
acute peritoneal dialysis
continuous ambulatory peritoneal dialysis

UNIT VII

Readings

Required:

Hazinski, M. F., Nursing Care of the Critically Ill Child. St. Louis, 1984, Chapter 7.

Renal Disease (film and cassette in the Learning Resource Center)

Date due_____

UNIT VIII

Gastrointestinal Disorders

This unit will provide the critical care nurse with a foundation for assessment of gastrointestinal disorders. This unit will be discussed as the previous units, in terms of essential anatomy and physiology, common clinical conditons and specific diseases. Care of the postoperative abdominal surgical patient will conclude this unit.

I. Goal: You will understand the essential anatomy and physiology of the gastrointestinal system.

Objectives: In class, you will complete, a 30 item, closed book, multiple choice, examination with 80% accuracy, including: functions of the gastrointestinal organs, gastrointestinal-portal circulation, fluids of the gastrointestinal tract, digestion and absorption, metabolism,and nutritional energy requirements.

Example: The primary site of intestinal secretion and absorption is:
a. the liver
b. the esophagus
c. the biliary tract
d. the duodenum

II. Goal: You will understand the etiology, pathophysiology, common clinical signs and symptoms, and medical and nursing management of gastrointestinal disorders.

Objectives: In class you will give a fifteen minute presentation of the etiology, pathophysiology, common clinical signs and symptoms, and medical and nursing management of common clinical conditions or specific diseases of the gastrointestinal system.

Choose one of the following:
dehydration
acute abdomen
gastrointestinal bleeding
hyperbilirubinemia
ascites

(see the next page for additional choices)

UNIT VIII

Gastrointestinal Disorders

portal hypertension
liver failure
disseminated intravascular coagulation
necrotizing enterocolitis
infant botulism
biliary atresia
viral hepatitis
cirrhosis
pancreatitis
inflammatory bowel disease
Reye's syndrome
esophageal burns
stress ulcers

III. Goal: You will be able to apply the Roy Adaptation Model of Nursing to the patient with gastrointestinal disorders.

Objectives: You will submit a 3-5 page nursing care plan, using the Roy Adaptation Model, discussing three nursing diagnoses of either the postoperative abdominal surgical patient or the patient receiving total parenateral nutrition.

UNIT VIII

Readings

Required:

Hazinski, M. F., Nursing Care of the Critically Ill Child. St. Louis, The C. V. Mosby Company, 1984, Chapter 8.

Date due_____

UNIT IX

Instrumentation: Principles and Techniques

The advancement in medical technology has provided the pediatric intensive care nurse with many instruments to aid in assessment and care of the patient in the intensive care unit. The purpose of this unit is to address some of the theoretical aspects of working with these instruments. Your expertise in using these instrument will come in the clinical setting where you will have hands on experience.

I. Goal: You will understand the theoretical basis for the use of various instruments used in the pediatric intensive care unit.

Objectives: In class, you will present one aspect of instrumentation used in the pediatric intensive care unit.

Choose one:

- characteristics of children that affect instrumentation
- general complications of monitoring
- instrument theory and safety
- electrocardiography
- vascular pressure monitoring
- venous pressure monitoring
- pulmonary and left heart filling pressures
- pacemakers
- defibrillation
- use of the intraaortic balloon pump
- contamination of vascular monitoring systems
- incentive spirometry
- transcutaneous oxygen and carbon dioxide monitoring
- arterial oximetry
- end tidal carbon dioxide monitoring
- oxygen administration systems
- mechanical ventilation
- endotracheal tubes
- resuscitation bags for hand ventilation
- chest tube systems
- intracranial pressure monitoring
- continuous monitoring of EEG
- temperature sensing devices

(see the next page for additional choices)

UNIT IX

Instrumentation: Principles and Techniques

closed warmers
open radiant warmers

UNIT IX

Readings

Required:

Hazinski, M. F., Nursing Care of the Critically Ill Child. St. Louis, The C. V. Mosby Company, 1984, Chapter 9.

EVALUATION

Grades: Those students who complete the objectives of presentations, nursing care plans and quizzes will receive a "B" in the course. The detailed paper on psychoscocial assessment in unit II and the final examination will determine who receives an "A".

The final examination will occur during the scheduled week of finals and will be an objective, closed book, one hundred item, cummulative examination of all of the material previously tested on the quizzes. The objective examination questions will be similar to those examples given in the individual units. The number of questions per unit will be reflected in the total number of hours spent in that particular unit.

Unit	Number of Questions
I	3
II	10
III	17
IV	17
V	3
VI	17
VII	13
VIII	13
IX	7
Total number of questions on final:	100

Those students passing with 80% or greater will receive an "A" on the final.

The following is a list of criterion for each grade.

Criterion	Grade
Completion of atleast 90% of total unit objectives; Grade "A" on paper due in unit II; and Grade "A" on final examination as identified above	"A"
Completion of atleast 80% of total unit objectives; Grade "B" on paper due in unit II; and Grade "B" on final examination as identified above	"B"
Completion of atleast 70% of total unit objectives; Grade "C" on paper due in unit II; and Grade "C" on final examination as identified above	"C"
Completion of atleast 60% of total unit objectives; Grade "D" on paper due in unit II; and Grade "D" on final examination as identified above	"D"

EVALUATION

Criterion	Grade
Less than 60% completion of total unit objectives; or incomplete paper due in unit II; or failure to complete final examination.....	"F"

Procedures for revising the course include a mid-semester evaluation utilizing an instructor evaluation form designed by the instructor. The students performance in the course is another indicator of effectiveness of the instruction. The performance of the students will be evaluated in terms of the objectives identified in each unit; to include quizzes, presentations and nursing care plans.

The course will be revised as necessary if the students are unable to meet the identified objectives on time. The mid-semester student evaluation will also help to identify the need for revision.

The course will also be evaluated in regard to the long term objectives as stated previously in the syllabus. The School of Nursing at Mount St. Mary's College receives notification of the results of the passage of student nurses on the State Board Examination.

The students will also be mailed a questionnaire, by the instructor, yearly for five years after taking the course. This questionnaire will evaluate the career status and educational goals of those students after taking the course.

The estimated number of students who will achieve the objectives will be approximately 90%. Those students who are unable to meet the objectives, as stated above, will be counseled by the instructor, on an individual basis, to determine the reason for inability to meet those objectives. In addition, the students advisor will be notified of inability to meet objectives. Arrangements will be made for individual tutoring as necessary. Students missing the final examination due to illness, as per physician note, will be allowed to take a make-up final one week after the final exam date.

Students will be allowed to take an incomplete if the student's work is of passing quality, but is incomplete. The grade incomplete will only be given when the student proves to the instructor his/her reason for requesting an incomplete is a valid one. The procedures for grade incomplete will be followed as per the college regulations. (See Mount St. Mary's College Handbook for specific details.)

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